

PROJECT MANUAL

2nd St. Streetscape Improvements
City of Muscatine
Muscatine, IA




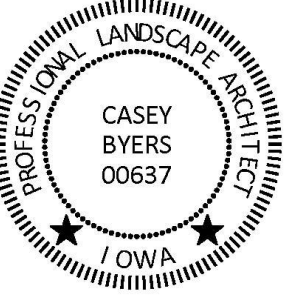
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CERTIFICATION
PROJECT MANUAL

for
2nd St. Streetscape Improvements
City of Muscatine
Muscatine, IA

This project is based on
SUDAS STANDARD SPECIFICATIONS, 2019 EDITION
unless modified herein.

	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Iowa.</p> <p><u><i>Gregory Broussard</i></u> Date <u>12/2/2019</u></p> <p>Gregory A Broussard License No. 21974 My renewal date is December 31, 2019 Pages or sheets covered by this seal: _____ _____</p>
	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Iowa.</p> <p><u><i>Casey Byers</i></u> Date <u>12/2/2019</u></p> <p>Casey Byers License No. 00637 My renewal date is June 30, 2021 Pages or sheets covered by this seal: _____ _____</p>

2ND STREET STREETSCAPE PROJECT

CITY OF MUSCATINE MUSCATINE, IOWA

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PUBLIC NOTICE

NOTICE OF TIME AND PLACE OF PUBLIC HEARING ON THE MISSISSIPPI DRIVE CORRIDOR PROJECT

Public Notice is hereby given that the City Council of the City of Muscatine, Iowa will hold a Public Hearing to hear objections to the plans, specifications, form of contract, and cost estimate for the proposed 2nd St. streetscape project. Said hearing will be held in the City Council Chambers, City Hall, Muscatine, Iowa on November 21st, 2019 at 7:00 p.m. All interested persons are invited to attend and will be given an opportunity to be heard relative to this matter.

Jerry Ewers, Acting City Administrator/Clerk

NOTICE TO BIDDERS **2nd St. Streetscape Project**

Notice is hereby given that the City of Muscatine, Iowa, will receive sealed proposals in the office of the City Clerk, City Hall, (215 Sycamore Street, Muscatine, IA 52761) until 10:00 a.m., January 15th, 2020, for the 2nd St. Streetscape project for the City of Muscatine. At 10:05 a.m. on the same day the City's Purchasing Agent shall open the bids received and announce the results in the City Hall Council Chambers.

Time and Place for Pre-Bid Meeting. A Pre-Bid Meeting will be held at 2:00 PM. on January 7th, 2020, for the 2nd St. Streetscape project at City Hall, Lower Conference Room, City of Muscatine, 215 Sycamore Street, Muscatine, IA 52761

Bids will be reported to the City Council at their meeting to be held at 7:00 p.m., February 6th, 2020. Said proposals shall be acted on at that time or at such later time and place as may then be fixed.

Description of the Type and Location of the Project

The 2nd St. Streetscape project is sidewalks, roadway, utilities, and streetscape construction project located on 2nd St Mulberry Ave and on Mississippi Drive to Pine St. Construction primarily includes pavement removal, excavation, , concrete sidewalks, concrete roadway paving, underground utility improvements, concrete pavers, streetscape amenities. All streets are within corporate city limits of Muscatine, Iowa. Work must be completed by October 1st, 2021 with interim completion date of October 2nd, 2020.

Proposals shall be submitted on a form furnished by the City and accompanied by a bid security in an amount equal to five (5) percent of the bid and shall stand as security that the successful bidder will enter into a contract for the work bid upon within ten (10) days after acceptance of his proposal by the City.

The City reserves the right to defer acceptance of any proposal for a period not to exceed thirty (30) calendar days and to reject any and all bids, to waive technicalities and to enter into such contract as it shall deem for the best interest of said City.

The Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Payment to the Contractor will be made from funds legally available for that purpose. Payment will be made on the basis of monthly estimates equal to ninety-five (95) percent of the contract price. The balance of the five (5) percent due to the contractor will not be made earlier than thirty (30) days from the final acceptance of said work by the City, subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa. Before final payment will be made, the Contractor shall certify that all materials, labor and services have been paid for.

All work is to be performed and completed under the guidelines of OSHA and in strict compliance with plans and specifications prepared by the City of Muscatine Public Works Department, which have heretofore been approved by the City Council and are now on file for public examination.

Contract Documents

Proposed plans, specifications, and contract documents may be available for review at the Department of Finance, City Hall, City of Muscatine, 215 Sycamore St, Muscatine, Iowa 52761, between the hours of 8:00 a.m. and 5:00 p.m., Monday thru Friday.

You may view and download the digital plan documents for free by entering Quest project # 6591686 on the website's Project Search page at www.questcdn.com. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, viewing, downloading, and working with this digital project information.

This Notice is published by order of the City Council of the City of Muscatine, Iowa.

Jerry Ewers, Acting City Administrator/Clerk

INSTRUCTIONS TO BIDDERS

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IB-01 BIDDER'S KNOWLEDGE

The proposed 2nd St. Streetscape project is located in the City of Muscatine, Iowa. Bidders shall familiarize themselves with the specifications and conditions, which will affect the construction. Specific items relating to the preparation of bids and the submission thereof are listed elsewhere in the Contract Documents. It will be the responsibility of the Bidder to examine all Contract Documents and to make a personal examination of the job site and the physical conditions, which may affect his bidding and performance under the contract.

IB-02 BIDDER'S QUALIFICATIONS

The Bidder may be required to satisfy the Owner as to his integrity, experience, equipment, personnel and financial ability to perform the work.

If the successful Bidder is a non-Iowa corporation, he shall submit proof to the Owner, prior to the execution of the contract, of authorization by the Secretary of State to do business in Iowa.

IB-03 METHOD OF BIDDING

Bidder shall submit unit price bids as required for the work covered by the specifications. Prices shall cover complete work and include all costs incidental thereto, unless otherwise indicated.

The Engineer may change location, quantities, and combination of units as required during the progress of construction.

Bids will be computed using quantities shown in the proposal. The unit price quantities are approximate and only for comparison of bids.

In the event of discrepancies between unit prices and unit price extensions listed in Bidder's proposal, unit prices shall govern.

IB-04 SUBMISSION OF BIDS

The bids shall be submitted in duplicate on the proposal form included herewith. The proposal shall be submitted in a sealed envelope separate from the bid security. The envelope shall bear the return address of the Bidder and shall be addressed as follows:

TO: City Clerk
City Hall
215 Sycamore
Muscatine, Iowa 52761

Proposal for
2nd St. Streetscape project

The bid shall be signed by a legally authorized representative of the Bidder.

The bid security shall be placed in a separate envelope attached to the envelope containing the bid.

Only the proposal form shall be included in the envelope with the bid. Do not submit plans and/or specifications with the bid.

IB-05 WITHDRAWAL OF BIDS

Bids may be withdrawn any time prior to the scheduled closing time for receipt of bids; but no bids may be withdrawn for a period of thirty (30) calendar days thereafter.

IB-06 EVALUATION OF BIDS

The Owner may consider such factors as bid price, experience and responsibility of Bidder, and similar factors in determining which bid deems to be the best interest of the Owner for the project.

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the agreement and to complete the work contemplated therein.

The Owner may reject any or all bids, waive informalities or technicalities in any bid, and accept that bid which it deems to be in its best interest.

IB-07 SALES TAX EXEMPTION

The City of Muscatine will provide each contractor and subcontractor for this project with a certificate of exemption and an authorization letter which can be presented to material suppliers which will allow the contractor/subcontractor to purchase building materials used in this contract exempt from Iowa sales tax and any applicable local option sales tax and school infrastructure local option tax except for such items noted in the Estimate Reference notes which are not tax exempt. Complete information on qualifying materials and supplies can be found at www.state.ia.us/tax, the Iowa Department of Revenue and Finance (IDRF) web site. Links can be found in the Business Taxes and Local Government categories. Bids submitted for this project should be submitted on this basis.

IB-08 EXECUTION OF CONTRACT

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance bond and payment bond within ten (10) calendar days from the date when Notice of Award is delivered to the Bidder. The Notice to Award shall be accompanied by the necessary Agreement and bond forms. In case of failure of the Bidder to execute the Agreement, the Owner may at his option consider the Bidder in default, in which case the bid bond accompanying the proposal shall become the property of the Owner.

The Owner, within thirty-one (31) days of receipt of acceptable performance bond, payment bond and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party and executed copy of the Agreement. Should the Owner not execute the Agreement within such period, the Bidder may, by written notice, withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

The Notice to Proceed shall be issued, in writing, following execution of the contract, by the Owner. The Contractor will acknowledge receipt of Notice to Proceed and work shall proceed within ten (10) days.

The contract, when executed, shall be deemed to include the entire agreement between the parties; the Contractor shall not claim any modification resulting from representation or promise made by representatives of the Owner or other persons.

IB-09 DISQUALIFICATION OF BIDDERS

Attention of bidders is directed to Section 553.23 of the current Code of Iowa, regarding unlawful combination in making public contracts.

IB-10 QUANTITIES

Estimated quantities shown on the proposal form are provided solely for the Contractor's information and shall not be construed as being necessarily accurate or complete.

Bidders must satisfy themselves of the accuracy of the estimated quantities in the bid tabulation included in the Form of Proposal by examination of the site and a review of the drawings and specifications including addenda. After bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

IB-11 COMPLETION DATE

All work must be completed by October 1st, 2021 with interim completion date of October 2nd, 2020.

Contractor shall pay liquidated damages for noncompliance with said completion provisions at the rate of One Thousand Five Hundred dollars (\$1,500.00) for each calendar day thereafter that the work remains incomplete beyond the October 2nd, 2020 interim completion date and at the rate of One Thousand dollars (\$1,000.00) for each calendar day thereafter that the work remains incomplete beyond the October 1st, 2021 completion date. Liquidated damages for failing to timely attain substantial completion and final completion are not additive and will not be imposed concurrently.

Should the Contractor fail to complete the construction work within the time specified, he shall reimburse the Owner for any extra engineering and inspection costs deemed necessary by the Owner necessitated by the continuance of the work beyond the time herein specified for completion. Such extra engineering costs, not included in the liquidated damages, charged to the Contractor as hereby agreed to in no way constitute a penalty, but said costs represent additional expense to the Owner caused by delayed prosecution of the work by the Contractor. Such additional expense will be deducted from the monies due the Contractor at the time of final payment, recognizing any extensions of time granted by the Owner.

IB-12 GUARANTEE

The Contractor shall furnish a maintenance bond, subject to the Owner's approval, guaranteeing to keep all work constructed under this contract in good repair for a period of two (2) years from date of final acceptance. Good repair shall be construed to mean free from any functional or structural deterioration, except that caused from ordinarily reasonable use and acts of God, which appreciably reduces the effectiveness of the improvement for the purpose intended or any serious departure from the standards or original construction.

If, in the opinion of the Owner, such deterioration takes place, they shall so notify the Contractor by registered letter to the address given in the Contractor's proposal and send a copy of such notice to the bonding company, which notice is mutually agreed to be sufficient and adequate. If the Contractor shall not proceed to remedy such defects as are called to his attention in the notice within ten (10) days, the City shall cause the repairs to be made as it deems best, and the entire cost thereof shall be paid by the Contractor or his sureties.

IB-13 QUESTIONS AND ADDENDA

If any person contemplating submitting a bid for the proposed work, material or equipment is in doubt as to the true meaning of any part of the plans, specifications or other Contract Documents, he may request an interpretation thereof. The person submitting the request will be responsible for its prompt delivery.

Questions concerning interpretation or intent of the Contract Documents should be directed to:

James Edgmond, P.E.
Public Works Building
1459 Washington Street
Muscatine, IA 52761
Phone 563-263-8933
Fax 563-263-2127

Any oral interpretation given will be valid only if confirmed by written addendum. Information obtained from an officer, agent, or employee of the Owner shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the contract.

The Owner reserves the right to revise or amend the Contract Documents, prior to the date set for receipt of bids. Such revisions and amendments, if any, will be announced by an addendum or addenda to the Contract Documents.

Copies of such addenda as may be issued will be furnished to all holders of specifications.

Bidders are required to acknowledge receipt of all addenda by listing such addenda in the Form of Proposal.

IB-14 PRECONSTRUCTION CONFERENCE

Following the award of contract, the Contractor and his subcontractors will be required to attend a preconstruction meeting at a time and place designated by the Owner.

IB-15 SUB-CONTRACTORS

The prime contractor shall submit to the Owner, in writing, the names of all sub-contractors along with the items and amounts to be sublet. The prime contractor shall not sublet more than 60% of the dollar amount of the contract. All sub-contractors shall be approved by the Owner before work is begun.

2nd St. Streetscape Project

CITY OF MUSCATINE - MUSCATINE, IOWA

FORM OF PROPOSAL

Name of Bidder _____

Address of Bidder _____

TO: The Honorable Mayor
and City Council
City Hall
Muscatine, Iowa 52761

GENTLEMEN:

- A. The undersigned Bidder submits herewith bid security in the amount of \$_____ in accordance with the terms set forth in the Instructions to Bidders.
- B. The undersigned Bidder, having examined the plans, specifications, Notice to Bidders, the location and sites of the proposed work, the nature of the work to be done, extent and condition of existing structures affecting, or affected by the proposed work, and being fully advised as to the extent and character of the work and all existing local conditions, relative to construction difficulties, hazards, labor transportation, hauling, trucking, plant sites, and other factors affected by or affecting the work covered by this proposal as outlined in the specifications and plans, including Addenda _____ and _____.

HEREBY PROPOSES to furnish all materials, tools, appliances, plant and equipment; and to perform all necessary labor required for the complete construction of the 2nd St. Streetscape Project for the City of Muscatine, Iowa and all items incidental thereto and to perform all work in accordance with the plans and specifications for said project, including all items to expense and profit, as follows:

PROPOSAL FORM

2nd St. Streetscape Project

BID ITEMS AND QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1	CLEARING AND GRUBBING	LS	1		
2	TOPSOIL, OFF-SITE	CY	28		
3	EXCAVATION, CLASS 13	CY	600		
4	SUBGRADE STABILIZATION, 12 INCH	SY	4005		
5	SUBGRADE TREATMENT, GEOTEXTILE	SY	4005		
6	SUBBASE, SPECIAL BACKFILL, 4 INCH	SY	4923		
7	SUBBASE, SPECIAL BACKFILL, 6 INCH	SY	662		
8	SUBBASE, MODIFIED SUBBASE, 6 INCH	SY	6013		
9	EXPLORATORY EXCAVATION	EA	20		
10	TRENCH FOUNDATION	TON	100		
11	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL (MANUFACTURED SAND)	CY	462		
12	RAVINE FILL AREA EARTHWORK MANAGEMENT	CY	1062		
13	TRENCH COMPACTION TESTING	LS	1		
14	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC TRUSS, 6 INCH	LF	50		
15	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC TRUSS, 8 INCH	LF	530		
16	SANITARY SEWER SERVICE CONNECTION	EA	15		
17	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	32		
18	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	359		
19	REMOVAL OF STORM SEWER, LESS THAN 36 INCH	LF	149		
20	SUBDRAIN, HDPE, 4-INCH	LF	681		
21	SUBDRAIN OUTLETS AND CONNECTIONS	EA	6		
22	VALVE BOX EXTENSION	EA	5		
23	VALVE BOX REPLACEMENT	EA	5		
24	SANITARY MANHOLE, SW-301, 48 INCH	EA	5		
25	STORM MANHOLE, SW-401, 48 INCH	EA	2		
26	INTAKE, SW-501	EA	2		
27	INTAKE, SW-508 MODIFIED	EA	2		
28	INTAKE, SW-512, 24" FLAT COVER	EA	1		
29	INTAKE, SW-541	EA	20		
30	TRENCH DRAIN	LF	10		
31	MANHOLE ADJUSTMENT, MINOR	EA	8		
32	INTAKE ADJUSTMENT, MINOR	EA	2		
33	CONNECTION TO EXISTING MANHOLE	EA	2		

34	REMOVE MANHOLE	EA	7		
35	REMOVE INTAKE	EA	22		
36	PAVEMENT, PCC, 8 INCH	SY	5414		
37	CURB AND GUTTER, 2.5 FEET, 6 INCH	LF	299		
38	CURB AND GUTTER, 2.5 FEET, 7 INCH	LF	1024		
39	REMOVAL OF SIDEWALK	SY	5361		
40	REMOVAL OF DRIVEWAY	SY	279		
41	REMOVAL OF CURB	LF	1278		
42	SIDEWALK, PCC, 4 INCH	SY	4616		
43	SIDEWALK, PCC, 6 INCH	SY	307		
44	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4750		
45	HISTORIC PAVERS, TYPE A WITH SAND SETTING BED & PCC SUBBASE (PAVERS FURNISHED BY CITY)	SF	2530		
46	CROSSWALK PAVERS WITH 3/4" ASPHALT SETTING BED	SF	2245		
47	DETECTABLE WARNING	SF	886		
48	DRIVEWAY, PAVED, PCC, 6-INCH	SY	335		
49	CONCRETE BAND, VARIABLE WIDTH	SY	103		
50	FULL DEPTH PATCHES	SY	1002		
51	PARTIAL DEPTH PATCHES	SF	2240		
52	PAVEMENT REMOVAL	SY	5407		
53	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	20		
54	PAINTED SYMBOLS AND LEGENDS	EA	10		
55	PAINTED SYMBOLS, PARALLEL PARKING MARKER	EA	124		
56	PAVEMENT MARKINGS REMOVED	STA	1.7		
57	TEMPORARY TRAFFIC CONTROL	LS	1		
58	SOD	SQ	16		
59	OVERSTORY TREE	EA	10		
60	ORNAMENTAL TREE	EA	22		
61	PERENNIAL GROUND COVER (1 GAL)	EA	749		
62	AMENDED PLANTING SOIL	CY	133		
63	SWPPP PREPARATION	LS	1		
64	SWPPP MANAGEMENT	LS	1		
65	FILTER SOCK, 20 INCH	LF	203		
66	STABILIZED CONSTRUCTION ENTRANCE	SY	900		
67	INLET PROTECTION DEVICE, DROP IN PROTECTION	EA	28		
68	CONSTRUCTION SURVEY	LS	1		
69	MOBILIZATION	LS	1		
70	CONCRETE WASHOUT	LS	1		
71	VAULT REPAIR TYPE 1	LF	10		
72	VAULT REPAIR TYPE 2	LF	440		

73	STEEL BENCH	EA	9		
74	LITTER RECEPTACLE	EA	9		
75	BIKE RACK	EA	5		
76	BOULDER SEATWALL	LF	115		
77	INTERSECTION MARKER	EA	3		
78	ELECTRICAL CONDUIT, OPEN CUT, PVC, 3-INCH	LF	3294		
79	ELECTRICAL CONDUIT, OPEN CUT, PVC, 2-INCH, CONSTANT POWER	LF	3478		
80	ELECTRICAL CONDUIT, OPEN CUT, PVC, 2-INCH, STREET SOUNDS	LF	1172		
81	ELECTRICAL CONDUIT, OPEN CUT, PVC, 2-INCH, REPLACE	LF	464		
82	JUNCTION BOX, ELECTRICAL, 13"X24"	EA	27		
83	JUNCTION BOX, ELECTRICAL, 8"X18"	EA	94		
84	EVENT POWER PEDESTAL	EA	9		
85	CHARGING PEDESTAL	EA	2		
TOTAL AMOUNT BID					

Company Name: _____

By: _____

(Title)

Date: _____

C. We further propose:

1. To do all extra work which may be required to complete the work contemplated at unit price or lump sum, to be agreed upon prior to starting such work.
2. To execute the form of contract with ten (10) days after Notice of Award is received and to complete all work by October 1st, 2021 with interim completion date of October 2nd, 2020.

All work must be completed by October 1st, 2021 with interim completion date of October 2nd, 2020.

Contractor shall pay liquidated damages for noncompliance with said completion provisions at the rate of One Thousand Five Hundred dollars (\$1,500.00) for each calendar day thereafter that the work remains incomplete beyond the October 2nd, 2020 interim completion date and at the rate of One Thousand dollars (\$1,000.00) for each calendar day thereafter that the work remains incomplete beyond the October 1st, 2021 completion date. Liquidated damages for failing to timely attain substantial completion and final completion are not additive and will not be imposed concurrently.

- D. Attached, hereto, is an affidavit in proof that the undersigned Bidder has not colluded with any person in respect to this Bid or any other Bids or the submitting of Bids for the contract for which this Bid is submitted.
- E. The undersigned Bidder states that this proposal is made in conformity with the Contract Documents and agrees that, in the event of any discrepancies or differences between any conditions of his proposal and the Contract Documents prepared by the Owner, the provisions of the latter shall prevail.
- F. The total bid is based on estimated quantities, and the actual amount will be adjusted in accordance with the final determination of quantities involved, as explained in the Detailed Specifications. In case of error in the item totals as quoted, the proper figure based on the estimated quantities and the unit prices as quoted shall govern.

G. The undersigned Bidder is prepared to submit the Bidders' Qualifications statement upon request.

Firm: _____

By: _____

(Title)

(Business Address)

(Seal - if bid is by a corporation)

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

EXHIBIT A

State of _____)
) ss.
County of _____)

(1) He is the _____ of _____,
the Bidder that has submitted the attached Bid:

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement, or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any Bidder, or, to fix any, overhead, profit, or cost element of the bid price or the bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the City of Muscatine or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant (Signed)

(Signed) _____

Title

Subscribed and sworn to before me
this _____ day of _____, 2019.

Title

My commission expires _____

NONCOLLUSION AFFIDAVIT OF SUBCONTRACTOR
EXHIBIT B

State of _____)
) ss.
County of _____)

_____, being first duly sworn, deposes and says that:

(1) He is the _____ of _____, hereinafter referred to as the "Subcontractor";

(2) He is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the Subcontractor to _____, the Contractor for certain work in connection with the _____ Contract pertaining to the 2nd St. Streetscape Project in Muscatine, Iowa;

(3) Such Subcontractor's Proposal is genuine and is not a collusive or sham bid;

(4) Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement, or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any Bidder, or, to fix any overhead, profit, or cost element of the bid price or the bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the City of Muscatine or any person interested in the proposed Contract; and

(5) The price or prices quoted in the Subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Title

Subscribed and sworn to before me
this _____ day of _____, 2020.

Title

My commission expires _____

STATEMENT OF BIDDER'S QUALIFICATIONS

EXHIBIT C

All questions must be answered and the data given must be clear and comprehensive. The statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1. Name of Bidder.
2. Permanent main office address, including City, State & Zip Code.
3. When organized.
4. If a corporation, where incorporated.
5. How many years have you engaged in construction work under your present firm or trade name?
6. Contracts on Hand: Schedule these, showing gross amount of each contract and the appropriate anticipated dates of completion.
7. General character of work performed by your company.
8. Have you ever failed to complete any work awarded to you? If so, where and why?
9. Have you ever defaulted on a contract? If so, where and why?
10. List the more important contracts recently completed by you, stating the approximate gross cost for each, and the month and year completed.
11. List your major equipment available for this contract.
12. Experience in construction work similar in importance to this project.
13. Background and experience of the principal members of your organization including the officers.
14. Credit available: \$_____.
15. Give bank reference.

16. Will you upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of Muscatine?
17. (a) Have you ever been a party to or otherwise involved in any action or legal proceeding involving matters related to race, color, nationality or religion? If so, give full details.
- (b) Have you ever been accused of discrimination based upon race, color, nationality, or religion in any action or legal proceeding, including any proceeding related to any Federal Agency? If so, give full details.
18. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the City of Muscatine in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated at _____ this _____ of _____
_____, 2020.

(Name of Bidder)

By _____

Title _____

State of _____)
_____) ss
County of _____)

_____ being duly sworn, deposes and says that he is the
_____ of _____
_____ and that the answers to the foregoing questions and all statements therein
contained are true and correct.

Subscribed and sworn to before me this _____ day of _____, 2020.

Notary Public

My Commission expires _____

FORM OF CONTRACT

THIS AGREEMENT, made and entered into this ____ day of _____, 2020, by and between the City of Muscatine, Iowa, party of the first part, hereinafter referred to as the "City" and _____, party of the second part, hereinafter referred to as the "Contractor".

WITNESSETH

That the Contractor and the City for the consideration stated herein mutually agree as follows:

ARTICLE 1: Statement of work. The Contractor shall furnish all supervision, technical, personnel, labor, materials, machinery, tools, equipment, and services, including utility and transportation services and perform all work required for the construction of the Mississippi Drive Corridor Project, Muscatine, Iowa, all in strict accordance with the Contract Documents prepared by the City of Muscatine, Department of Public Works.

ARTICLE 2. The City will pay the Contractor for the performance of the contract, from funds legally available for that purpose. Payment will be made on the basis of an estimate equal to ninety-five (95) percent of the contract price, including materials, subject to approval of the City. The balance of the five (5) percent due to the Contractor will be made no earlier than thirty (30) days from the final acceptance of said work by the City.

The Contractor shall provide surety bond in the amount of 100% of the contract and shall guarantee the maintenance of the improvement for a period of two (2) years after its completion and acceptance by the City.

Completion Dates: All work must be completed by October 1st, 2021 with interim completion date of October 2nd, 2020.

The contract amount is \$_____.

ARTICLE 3. Contract: The executed contract documents shall consist of the following:

- | | |
|---------------------------|----------------------------|
| a. This Agreement | f. Signed Copy of Proposal |
| b. Addenda Numbers_____ | g. Special Conditions |
| c. Plans | h. Detailed Specifications |
| d. Notice to Bidders | i. Standard Specifications |
| e. Instruction to Bidders | j. General Conditions |

THIS AGREEMENT, together with other documents enumerated in this ARTICLE 3, with said other documents are as fully a part of the contract as if hereto attached or herein repeated, forms the contract between the parties hereto. In the event that any provision in any component part of this contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties thereto have caused this AGREEMENT to be executed in triplicate original copies on the date and year first above written.

CITY OF MUSCATINE, IOWA

CONTRACTOR

By: Diana Broderson, Mayor

By:

TITLE

ATTEST:_____
By: Jerry Ewers, Acting City Administrator/Clerk

ATTEST:_____

TITLE

PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT, a Principal, hereinafter called the Contractor and

(Here insert the legal title of Surety)

as Surety, hereinafter called the Surety, are held and firmly bound unto City of Muscatine, Muscatine County, Iowa as obligee, hereinafter called the Owner, in the amount of

DOLLARS (\$) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 2020, entered into a Contract with Owner for the

2ND ST. STREETSCAPE PROJECT

in accordance with drawings and specifications prepared by the Department of Public Works, City of Muscatine, Iowa, which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then the obligation of this bond shall be null and void; otherwise it shall remain in full force and effect.

A. The Surety hereby waives notice of any alteration by Owner to be, in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for submission to Owner for completing the Contract in accordance with its terms and conditions, and upon determination by Owner and Surety of the lowest responsible Bidder, arrange for a contract between such Bidder and Owner, and make available as work progresses (even though there should be a default or a succession or defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price", as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

- B. The Contractor and his surety shall be obligated to remedy any defects in workmanship or materials that may develop in the improvements covered by this bond for a period of two (2) years from the date of acceptance of the improvements by the owner.
- C. Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the contract falls due.
- D. No right of action shall accrue to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

IT IS A FURTHER CONDITION OF THIS OBLIGATION that the principal and surety shall, in accordance with the provisions of Chapter 573 of the Code of Iowa, pay to all persons, firms or corporations having contracts directly with the principal or with subcontractors all just claims due them for labor performed or materials furnished in the performance of the contract on account of which this bond is given.

The provisions of Chapter 573, Code of Iowa, are a part of this bond to the same extent as if they were expressly set out herein.

SIGNED AND SEALED THIS _____ DAY OF _____,
A.D. 2020.

IN THE PRESENCE OF:

	PRINCIPAL
_____	_____
WITNESS	TITLE

	SURETY

SPECIAL CONDITIONS

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SC-01 FORM OF DETAILED SPECIFICATIONS

The Detailed Specifications are of the abbreviated or outline type and the Contractor must supply omitted words or phrases by interference. Omissions of words or phrases such as "the contractor shall", "in conformance with", "shall be", "as noted on the plans", "according to the plans", "a", "an", "the", and "all" are intentional.

SC-02 DEFINITIONS

OWNER:	City of Muscatine, Iowa which is the Party of the First Part in the accompanying contract, acting through its authorized representatives, and referred to in these proceedings as "City" or "Owner".
ENGINEER:	A city Engineer of Muscatine, Iowa, or his authorized representative.
INSPECTOR:	The authorized representative of the Owner, assigned to the detailed inspection of the work or materials therefore, and to such other duties as may be delegated to him in these specifications.
CONTRACTOR:	The Party of the Second Part in the accompanying contract for the improvement covered by these specifications or his authorized representative.
SUBCONTRACTOR:	Any person, firm, or corporation who has, with the approval of the Owner, contracted with the Contractor to execute and perform in his stead all, or any part, of the contract.
SPECIFICATIONS:	The documents that set forth manner in which the proposed work is to be accomplished, which have been prepared by the Department of Public Works and their Consultants and approved by the Owner, official copies of which are now on file with the City Clerk.
WORK OR PROJECT:	The improvement that is to be made, the approximate quantities for which, and the location of, as set out in the NOTICE TO BIDDERS.

PLANS:

Drawings that may indicate manner, materials, or requirements of this contract and are made a part of the Contract as if bound into the specifications.

SC-03 NOTICE TO PROCEED

The Contractor shall not commence work before receiving written notice to proceed and must begin within ten (10) days after such notice.

SC-04 MAINTENANCE AND CONTROL OF TRAFFIC

The Contractor shall conduct his work as to assure the least possible obstruction to access by the residents along the project. Suitable access shall mean a roadway of sufficient width, free from ruts, potholes and mud holes, and capable of carrying a passenger car without damage to the car. When access must be denied due to construction, the Contractor shall provide suitable access within 24 hours after responsible construction is completed. Whenever construction is stopped due to inclement weather, weekends, holidays or other reasons, suitable access shall be provided for all property owners.

Emergency vehicles shall be provided reasonable access at all times.

The Contractor shall maintain all equipment within the gross weight limits as licensed by the State of Iowa. Damage to existing asphalt or concrete streets as a result of excessive loads shall be the Contractor's responsibility to repair. Damage to existing asphalt or concrete streets as a result of construction equipment that maintains the licensed weight limit shall be the responsibility of the city.

All open excavations, machinery, material or other items on the project that could constitute a hazard shall be marked by lighted barricades to ensure the safety of the public. (See DS-01.03)

The Contractor shall furnish the name and telephone number of at least one individual who shall be responsible for maintaining project signs and barricades at night, weekends and any time workers are not present.

Existing traffic and street name signs which will interfere with construction will be removed and relocated by the Contractor at a location designated by the Engineer. Any signs damaged by the Contractor shall be repaired or replaced at no expense to the Owner.

SC-05 COPIES OF PLANS & SPECIFICATIONS

After award of contract, the Owner will furnish the Contractor three (3) sets of plans and specifications. Additional sets will be available upon request.

SC-06 RIGHT-OF-WAY

All construction activity will be on rights-of-way provided by Owner.

SC-07 CONSTRUCTION FACILITIES

Limited storage space for materials and equipment will be available within portions of the right-of-way provided for construction.

All storage areas will be subject to approval.

The Contractor will arrange for any utilities required for construction facilities, and all expense will be borne by the Contractor.

SC-08 WASTE SITE

A waste site for rubble and miscellaneous non-asphalt material will be provided and specified by the Engineer.

SC-09 INSURANCE

The Contractor shall purchase and maintain throughout the construction period, insurance in the following minimum requirements, and the coverage must be written in a company that has a Best's rating of B+ or better:

- (1) Worker's compensation insurance including Employer's Liability and Occupation disease covering all Iowa employees for statutory Iowa benefits who perform any of the obligations assumed by the Contractor under the contract. The policy will contain broad form all states endorsement.
- (2) Comprehensive General Liability, including independent contractors, completed operations and products, contractual liability, broad form property damage, personal injury, and X, C, and U coverage; coverages must meet the following limits. Deductibles on bodily injury are not acceptable:

COVERAGE	MINIMUM LIMITS
Bodily Injury or Death	\$1,000,000 each occurrence \$5,000,000 aggregate
Property Damage	\$1,000,000 each occurrence
Combined Single Limit	\$1,000,000 each occurrence
Umbrella Liability Coverage	\$2,000,000 Total

- (3) Comprehensive General Automobile liability insurance on all self-propelled vehicles not covered under general liability and used in connection with the Contract, whether owner, non-owner, or hired:

COVERAGE	MINIMUM LIMITS
Bodily Injury or Death	\$1,000,000 each occurrence
Property Damage	\$1,000,000 each occurrence
Option: Combined Single Limit	\$1,000,000 each occurrence

The Owner shall have the right at any time to require public liability insurance and property damage liability insurance greater than those required in the above paragraphs. In any such event, the additional premium or premiums payable solely as the result of such additional insurance shall be added to the bid price.

Any reductions in limits or coverages or exceptions to the insurance requirements can be made if requested in writing and mutually agreed to.

The Contractor shall furnish to the Owner, Certificates of Insurance evidencing compliance with the foregoing requirements before commencing any operations under this contract. (These Certificates shall contain a provision that the coverage afforded under the policies will not be canceled or materially changed until at least thirty (30) days prior written notice has been given to the Owner and Engineer).

SC-10 CONTRACT TERMINATION

Provisions contained in Chapter 573A Code of Iowa providing for the termination of contracts in construction of public improvements when construction is stopped because of national emergency shall apply to and be a part of this contract and binding on all parties including subcontractors and sureties upon any bond given or filed in connection therewith.

SC-11 CODES AND STANDARDS

- a. Perform work in accordance with best present day installation and manufacturing practices; conform to "Manual of Accident Prevention in Construction" by the Associated General Contractors of America, Inc., and Iowa Employment Safety Commission requirements.
- b. Comply with all applicable laws, building and construction codes, and requirements of governmental agencies under those jurisdiction work is being performed; fees for permits and licenses shall be paid by Contractor.
- c. Unless specifically noted to the contrary, conform with and test in accordance with applicable sections of latest revisions of codes and standards listed in Detailed Specifications.
- d. Conflicts:
 - 1. Between referenced codes and standards: code or standard establishing more stringent requirements shall be followed.
 - 2. Between referenced codes and standards and specifications and/or plans: one establishing more stringent requirements shall be followed.
 - 3. Between specifications and plans: plans shall govern.
- e. All work included under this Contract shall be done in accordance with the Occupational Safety and Health Act of 1970 (Williams-Steiger Act) as amended and enforced by the governmental authority responsible for the local enforcement of the Act. Enforcement and responsibility for fulfilling this provision of the specifications shall rest solely with the contractor, his superintendents, and his foreman, and in no way shall rest with the Owner or the Engineer.
- f. All work included under this contract shall be done in accordance with the Secretary of Labor's Safety and Health Standards established under PL 31-54.

SC-12 SURVEYS AND STAKING (Applicable Only When Construction Survey is not a Bid Item)

The Contractor will be responsible for any survey and/or staking required and will be incidental to the project.

SC-13 MATERIAL TEST AND CERTIFICATION

Material tests or certification will be required on all materials (pre-cast concrete structures included) incorporated in the project. Such testing and certification costs shall be provided by the City. Two (2) copies of the test results or certification should be filed with the Engineer prior to the material usage.

The class, date of manufacture, and trademark shall be plainly marked or stenciled on the inside of each segment of reinforced concrete pipe not later than 24 hours after the pipe is made.

SC-14 PAYMENT

Separate payment will be made for only those items specifically listed in the proposal. Payment will be made for the quantities of work completed in accordance with Item DS-05 included in the Detailed Specifications.

Payment will also be made in accordance with the Notice to Bidders.

SC-15 COORDINATION OF CONSTRUCTION BY THE CONTRACTOR

Coordination work with other contractors, Owner and Engineer to assure orderly and expeditious progress of work.

Select order of work and establish schedule of working hours for construction, subject to approval of Owner and Engineer.

Maintain existing water systems, sewer systems, gas systems, electrical utilities, highways and railroads in substantially continuous operation during construction, unless specifically permitted otherwise by Engineer or other authority.

Perform work hazardous to operation of existing water systems, sewer systems, gas systems, electrical utilities, railroads and highways, or which will require interruption of service, at times specifically approved by Owner and Engineer, or authority in charge of specific utility or service involved.

The Contractor shall be responsible for giving advance notice to all public and private utility companies of his work and use all necessary precautions to prevent damage to all utilities. The Contractor shall be held responsible for all damages and will bear the cost of any repairs or damages caused by his neglect.

Make any temporary connections necessary for maintaining service during course of work and continued operation of sewer system at Contractor's expense.

Make temporary connections in workmanlike manner; avoid hazards to personnel or service.

Remove temporary connections after permanent connections are made.

Schedule construction to minimize interruptions to utility service or use of street barricades and detours.

SC-16 SANITARY FACILITIES

Sanitary facilities shall be provided by Contractor for use of all construction personnel, including those of other contractors, for the duration of the project, as follows:

Facilities shall consist of chemical units, complete with weather-tight enclosure adequately ventilated, and equipped with latching door.

Chemical units shall be maintained weekly or at lesser periods if determined necessary. Chemical units shall be in accordance with the rules and regulations of the locality of the project (state, county or city).

Contractor shall furnish toilet paper for the chemical units and shall replenish supply whenever required.

Sanitary facilities remain property of the Contractor and, upon completion of the work, shall be removed from the site.

SC-17 MINOR WORK

Any minor work not specifically mentioned in the specifications or shown on the plans but obviously necessary for the proper completion of the work shall be considered as being a part of and included in the contract and shall be executed in the proper manner and the contractor shall not be entitled to extra or additional compensation for same.

SC-18 SITE CLEANUP

The Contractor shall be responsible for removal of all debris remaining at the project site, which is the result of the various construction operations. The final cleanup of the project site must be completed to the satisfaction of the Owner and Engineer before final payment will be made.

SC-19 FINAL INSPECTION AND ACCEPTANCE

The Contractor shall notify the Engineer when work is considered to be complete and ready for final inspection.

The Engineer, after determining that the work is ready for final inspection and giving ten (10) days notice to the Contractor, will make final inspection and tests he deems necessary to determine that provisions of the specifications are satisfied.

The Owner will not accept work or make final payment to the Contractor until the Engineer has

certified that the work of the Contractor is complete and in conformance with the specifications.

SC-20 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

The Contractor assumes full responsibility for the safekeeping of all materials and equipment and for all unfinished work until final acceptance by the Owner, and if any of it be damaged or be destroyed from any cause, he shall replace it at his own expense.

The Contractor shall indemnify and save harmless the Owner against any liens for nonpayment of his bills in connection with the contract work. The Contractor shall furnish the Owner satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type under this contract have been fully paid prior to the acceptance of the work by the Owner.

Contractor will indemnify, defend, keep and save harmless, Owner, its agents, officials and employees against all suits or claims that may be based on bodily injury to persons or damage to property of others, or personal injury including libel and slander that is the result of an error, omission or negligent act of Contractor or any person employed by the Contractor, sub-contractor or any person employed by the Contractor, sub-contractor or agent of either.

If the contract involved construction of a structure that would normally be the subject of builders risk insurance, Contractor will purchase such a policy for the full-completed value of the structure, with allowable exclusions. This policy will be written on an "all risk" basis. The named insured will include the owner, general contractor, and any subcontractors as their interest may appear. A deductible of 2% of the completed value with a maximum of \$5,000 will be permitted.

SPECIAL PROVISIONS
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01 – Section 7030 – Sidewalks, Shared Use Paths, and Driveways Special ProvisionsSP 3-4

02 – Section 9030 – Plant Material and Planting Special ProvisionsSP 5-6

SP-01 SECTION 7030 – SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS SPECIAL PROVISIONS

*This special provision amends Section 7030 as it pertains to the following bid items:

- Concrete unit pavers, Type B & C, with sand setting bed and PCC subbase
- Historic pavers, Type A, with sand setting bed and PCC subbase (pavers furnished by City)
- Crosswalk concrete unit pavers, Type D, on concrete base with 3/4" asphalt setting bed
- Detectable warnings

1.03 Submittals: Add the following to item C.

C. Concrete unit paver types and source, manufacturer specifications, HMA setting bed mix design and gradation reports, samples of each type of paver showing color and texture, and polymeric sand joint filler.

1.08 Measurement and Payment: Item F covers the measurement and payment for all concrete unit pavers with concrete subbase. Delete item 1. Revise item 2 per the following.

F. Concrete Unit Pavers

1. Delete.

2. Concrete Unit Pavers with Concrete Base:

- a. Measurement: Measurement will be in square foot (SF) for the area of concrete unit pavers placed on a concrete base. The area of the concrete base will not be measured separately.
- b. Payment: Payment will be at the unit price per square foot (SF) for the area of concrete unit pavers placed on concrete base.
- c. Includes: Unit price includes, but is not limited to, Subgrade preparation, concrete base, rebar, HMA setting bed (if required by specified installation), neoprene asphalt mastic (if required by specified installation), concrete unit pavers and polymeric sand joint filler.

2.03 Brick Pavers: Replace text with the following.

A. Refer to Sheet T.01 of the contract documents for list of concrete unit paver types, color and manufacturer information.

B. Contractor shall furnish additional pavers to Owner at completion of project, palletized and delivered to City yard. Cost for additional pavers is incidental to paver unit bid price.

Following additional quantity shall be furnished for each paver type:

- Paver Type B: 50 SF
- Paver Type C: 100 SF
- Paver Type D: 100 SF

2.06 Brick Joint Filler: Replace text with the following.

A. Joint filler for concrete unit pavers shall consist of polymeric sand. Acceptable products are Alliance – Gator Maxx or Techniseal NextGel, color to be approved by Engineer.

B. Contractor shall furnish two (2) additional bags of joint filler to Owner at completion of project, delivered to City yard. Cost is incidental to paver unit bid price.

2.07 Detectable Warnings: Replace text with the following.

Refer to contract documents for a description of detectable warning panel, size and location.

3.06 Brick Sidewalks: This section shall apply to concrete unit pavers set on concrete base. Refer to contract documents for installation details and manufacturer standard specifications.

SP-02 SECTION 9030 – PLANT MATERIAL AND PLANTING SPECIAL PROVISIONS

*This special provision amends Section 9030 as it pertains to the following bid items:

- Deciduous Shrubs
- Ornamental Trees
- Perennial Ground Cover (1 Gal.)
- Deciduous Trees

1.08 Measurement and Payment: Replace with the following.

1. Measurement: Each tree, shrub, groundcover or perennial plant accepted in place will be counted.
2. Payment: Payment will be at the unit price for each tree, shrub, or groundcover perennial plant. Payment will be made according to the following:
 - a. 100% of unit price at initial acceptance (less retainage). Initial acceptance will be determined by Engineer. Plant material shall be thriving, fully maintained and show no signs of stress. Upon substantial completion of entire project, a one-year warranty period will commence. Contractor shall provide one-year warranty certificate with start and finish dates as directed by Engineer. Contractor shall maintain all plant material as necessary, including watering, to ensure healthy, vigorous plant material throughout warranty period.
 - b. At end of one-year warranty period, the Contractor and Engineer will conduct a thorough review of all plant material. Any plant material not thriving shall be replaced with same size, species and quality as originally planted, per contract documents, at no additional cost to the Owner. A one-year warranty period will apply to all replacement plant material.
3. Includes: Unit price includes, but is not limited to, delivery, excavation, installation, watering, backfill, mulching, wrapping, staking or guying, herbicide, maintenance during establishment and warranty periods, and replacements.

2.02 Mulch: Replace with the following.

- A. Finely shredded, double processed hardwood mulch.
- B. Particle sizes ranging from 0.25-0.5 inch diameter and maximum 3 inches in length.
- C. Green or freshly chipped or shredded mulch shall be rejected.

D. Mulch shall be free of weeds, weed seed, chaff, diseases, or other foreign material.

2.03 Backfill Material: Replace with the following.

A. Planting backfill shall consist of amended planting soil as indicated on contract documents. See 'T' Sheet Series for amended soil mix design.

B. Existing on-site soils may not be used as planting backfill.

TECHNICAL SPECIFICATIONS

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05 – Section 05500 – Custom Metal Fabrication.....	TS 14-16

TS-01 SECTION 02870 – SITE FURNISHINGS

PART 1 -- GENERAL

1.1 Summary

A. SECTION INCLUDES

1. Requirements for furnishing and installing site furnishings.

B. MEASUREMENT AND PAYMENT

1. Measurement and payment for site amenities shall be per unit quantity and shall include all equipment, materials, and labor to install site furnishings complete. Footings and/or attachment hardware are incidental to the unit price.

1.2 Submittals

- A. Shop Drawings: Shop drawings to be submitted for each item, including color chips of the same material as the site furniture item.
- B. Product Data: Submit manufacturer's assembly and installation drawings.
- C. Color Samples: Submit color samples for approval prior ordering

1.3 Ordering, Delivery, Handling, and Storage

- A. Contractor shall be responsible for execution of all phases of site furnishings work, including ordering, shipping, storage, and installation, and shall protect furnishing from damage by construction and clean-up activities following installation until acceptance of project by Owner.

PART 2 -- PRODUCTS

2.1 Benches

A. Victor Stanley

RBF-28 Steel Bench, 6' Length, Black (to match Mississippi Drive project benches)

Andrew Hosmer
P.O. Drawer 330
Dunkirk, MD 20754
Tel: 301.855.8300 ext. 323

B. Approved Equal

2.2 Litter Receptacle

A. Victor Stanley

SDC-36, SteelSites Side Door Receptacle, Convex Lid, Keyed Lock, Black (to match Mississippi Drive project Litter Receptacles)

Andrew Hosmer
P.O. Drawer 330
Dunkirk, MD 20754
Tel: 301.855.8300 ext. 323

B. Approved Equal

2.3 Event Power Pedestal

A. As manufactured by Midwest Electric or approved equal
1. Refer to detail sheet U.06 for information

2.4 Charging Station

A. As manufactured by Landscape Forms / Legrand
1. Refer to detail sheet U.06 for information

PART 3 -- EXECUTION

3.1 General

A. Install all site furnishings at locations described on the Drawings.

3.2 Installation

A. Install all site furnishings as per manufacturer's recommendations.

END OF SECTION

TS-03 SECTION 04400 – DECORATIVE STONE SEATWALLS

PART 4 -- GENERAL

4.1 Section Includes

- A. Quarried limestone products for boulder seatwalls.

4.2 Measurement and Payment

- A. Limestone Boulder Seatwall as indicated on the plans, complete-in-place will be measured and paid as per Linear Foot (LF) of outcropping boulder seatwall. Unit bid price shall include, but not limited to, fabricating, furnish and install all items necessary to complete including outcropping boulder, and aggregate pins per contract documents.
 - 1. Concrete base beneath outcropping seatwall will be paid at per Square Yard (SY) unit of Concrete Band – Variable Width, bid item, see plan drawings for locations.

4.3 Submittals

- A. Product Data: Provide data on stone units including source and description of type, finish, and size.
- B. Shop Drawings:
 - 1. Submit cutting and setting drawings indicating sizes, dimensions, sections, and profiles of stones; arrangement and provisions for jointing and anchoring.
- C. Submit 3 samples showing, color range, vein direction, markings, surface finish of each product specified.
- D. Submit stone fabricator's installation instructions

PART 5 -- PRODUCTS

5.1 Stone Supplier

- A. Kasota Stone Fabricators – Mankato, MN

Adam Brookins (763) 227-1777

Or Approved Equal

5.2 Stone

A. Boulder Seatwall

1. Kasota Amber Limsetone Custom Block
2. Color: Buff/Natural
3. Splitface front/back, natural top/bottom, w/ sawn/mitered jointing
4. Refer to plans and details for installation and fabrication information
5. Boulder seatwalls shall be tagged by each location by supplier prior to delivery to site. Stone supplier shall provide shop drawings indicating location of each section of each wall for installation.

5.3 Anchoring Pins

A. STAINLESS STEEL PINS

1. 1/2" X 6" Stainless steel pins, two (2) per block, see contract documents for locations.

PART 6 -- EXECUTION

6.1 Preparation

- A. Stone shall be brushed free of dust and foreign matter.
- B. Wet stone sufficiently to take up surface absorption

6.2 Setting

A. Boulder Seatwall

1. Dry fit boulder seatwall sections together prior to pinning in place.
2. Review mockup of each wall in place with Engineer prior to pinning.
3. Install boulder seatwalls per installation details in contract documents.
4. Mitered joints shall fit tight and be free of voids and gaps.
5. Upon completion, remove any jagged or sharp stone edges.

6.3 Cleaning

- A. Keep stone work as clean as possible as work progresses. Upon completion clean stone thoroughly with water or detergent and water and fiber brushes. Thoroughly rinse when complete with clean water. Do NOT use acids or wire brushes.

- B. Special consideration and protection shall be provided when brickwork is cleaned above the limestone. Strong acid compounds used for cleaning brick will burn and discolor the limestone.

END OF SECTION

PART 1 - GENERAL

6.4 Section Includes

- A. This section includes all labor, materials, equipment, supervision and items of pertinence required to furnish and install stone masonry work for the Intersection Marker.
- B. This section includes specifications for unit masonry, stone veneer masonry and stone caps.

6.5 Measurement and Payment

- A. Stone Masonry shall be considered as an incidental to the associated bid items including: Intersection Marker. Refer to details shown on plans and the following.

6.6 Submittals

- A. Shop Drawings
 - 1. Stone masonry details shall be included in the shop drawings for each feature. Information shall include material type, finish, size, attachment, etc. necessary for complete installation.
 - 2. All masonry work including unit masonry, veneer masonry and cap installation shall be covered by shop drawings.
- B. Product Data: For the following products:
 - 1. Stone Veneer manufacturer's data
 - 2. CMU block manufacturer's data
 - 3. Pre-cast stone caps manufacturer's data
 - 4. Grout Mix design and data
 - 5. Mortar Mix design and data
 - 6. Waterproofing Membrane product data
- C. Samples for Verification:
 - 1. Pointing mortar/grout samples for color selection
 - 2. Joint sealant for color selection
 - 3. Stone cap for color and finish selection
 - 4. Stone Veneer Mockups

- (a) 24"x24" mock-up for each feature showing typical joint connections, veneer sizing and finish
- (b) Sample to be approved and available on site during construction.
- (c) Mockups will be used for quality control and will not be a part of permanent construction.

D. Qualification Data

- 1. Submit data verifying qualifications and five (5) years of experience for manufacturer and installer of similar stone product. Include list of three (3) completed projects having similar scope with water feature work identified by name, location, date, reference names, and phone numbers.

6.7 Quality Assurance

- A. Minimum 5 years of documented experience with work of similar scope and complexity required by this Project involving water feature design.
- B. Single Source Responsibility for Pre-Cast Caps: Obtain pre-cast cap units of uniform texture and color, from one manufacturer for each different product required for each continuous surface of visually related surfaces.
- C. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.
- D. Single Source Responsibility for Stone Veneer Materials: Obtain stone veneer of uniform quality, including color variations and surface texture, from one manufacturer for each component.

6.8 Delivery and Storage

- A. Deliver materials to project site in undamaged condition.
- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, or other causes. Limit moisture absorption of concrete masonry units during delivery and until time of installation to the maximum percentage specified for Type I units for the average annual relative humidity as reported by the U.S. Weather Bureau Station nearest project site.
- C. Store cementitious materials off the ground, under cover, and in dry location.
- D. Store aggregates where grading and other required characteristics can be maintained.

- E. Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.
- F. Precast concrete to be stored in secure area in original packaging. Protect from damage by other trades.

6.9 Field Conditions

A. Cold-Weather Requirements

- 1. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- 2. Cold-weather procedures when ambient temperature falls below 40°F (4°C) or the temperature of masonry units is below 40°F (4°C).

B. Hot-Weather Requirements

- 1. Implement hot-weather construction procedures in accordance with ACI 530.1/ASCE 6/TMS 602.
- 2. Hot-weather procedures when ambient temperature exceeds 100°F (38°C), or exceeds 90°F (32°C) with a wind velocity greater than 8 mph.

PART 7 -- PRODUCTS

7.1 Concrete Masonry Units

- A. General: Comply with referenced standards and other requirements indicated below applicable to each form of concrete masonry unit required.
- B. Concrete Masonry Pilaster Block: Provide units complying with characteristics indicated below for grade, type, face size, exposed face, and weight classification.
 - 1. Grade N.
 - 2. Size: Manufacturer's standard units with nominal face dimensions per shop drawings.
 - 3. Type 1, moisture-controlled units. Cure units by ASTM Type 1 method.
 - 4. Hollow Load-Bearing Block: Materials shall comply to ASTM C 90 for material and strength, and as follows:
 - (a) Weight Classification: Normal weight.

7.2 Limestone Veneer

A. Splitface Limestone Veneer

1. Kasota Stone Fabricators – Mankato, MN
Adam Brookins (763) 227-1777
2. See construction documents for type, size and finish.

7.3 Mortar and Grout Materials

- A. Portland Cement: ASTM C 150, Type I, except Type III may be used for cold weather construction. Provide natural color or white cement as required to produce required mortar color.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Aggregate for Mortar: ASTM C 144, except for joints less than 1/4" use aggregate graded with 100% passing the No. 16 sieve.
- D. Aggregate for Grout: ASTM C 404
- E. Water: Clean and potable
- F. Mortar color: Submit samples to Engineer for Approval.

7.4 Masonry Cleaners

- A. Manufacturer's standard strength general purpose cleaner designed for new masonry surfaces of type indicated; composed of blended organic and inorganic acids combined with special wetting systems and inhibitors, expressly approved for intended use by manufacturer of masonry units being cleaned.
 1. Products: Subject to compliance with requirements, provide "Sure Klean" No. 600 Detergent; ProSoCo, Inc.

7.5 Mortar and Grout Mixes

- A. Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, anti-freeze compounds or other admixtures, unless otherwise indicated. Do not use calcium chloride in mortar or grout.
- B. Mixing: Combine and thoroughly mix cementitious, water, and aggregates in a mechanical batch mixer; comply with referenced ASTM standards for mixing time and water content.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification, for types or mortar required, unless otherwise indicated.

1. Limit cementitious materials in mortar to Portland cement-lime
 2. Use Type S mortar for all masonry.
- D. Grout for Unit Masonry: Comply with ASTM C 476 for grout for use in construction of reinforced and non-reinforced unit masonry. Use grout of consistency indicated or, if not otherwise indicated, of consistency (fine or coarse) at time of placement which will completely fill all spaces intended to receive grout. Grout to have 3000 psi ultimate compressive strength.

7.6 Steel

- A. Steel shall comply with ASTM 615 and be Grade 60.
- B. Shop bends only

PART 8 -- EXECUTION

8.1 Installation

- A. Cleaning Reinforcing: Before placing, remove loose rust, ice, and other coatings from reinforcing.
- B. No stone veneer shall be installed until supporting structure is approved by owner's representative.
- C. Install stone veneer with vertical end joints staggered randomly to form an offset pattern.

8.2 Construction Tolerances

- A. Variation in Cross-Sectional Dimension: For all elements, from dimensions shown, do not exceed minus 1/4" nor plus 1/2"
- B. Variation in Mortar joint Thickness: Do not exceed bed joint thickness indicated by more than plus or minus 1/8", with a maximum thickness limited to 1/2". Do not exceed head joint thickness indicated by more than plus or minus 1/8".
- C. Setting cap:
 1. Set accurately as shown on approved shop drawings.
 2. Alignment of cap should be straight and true to all dimensions, not to vary more than 1/8" in length, height, or width.
 3. Install anchors as shown on details.
 4. Fill joints between with manufacturer-approved joint sealant as specified in shop drawings.

8.3 Laying Stone Veneer

- A. Lay out veneer in advance for accurate spacing of surface bond patterns with uniform joint widths and to accurately locate openings, movement-type joints, returns, and offsets. Avoid the use of less than half-size units at corners.
- B. Pattern Bond: Lay exposed masonry in the bond pattern shown or, if not shown, lay in running bond with vertical joint in each course centered on units or courses above and below.
- C. Stopping and Resuming Work: Rack back 1/2-unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.

8.4 Mortar Bedding And Jointing

- A. Lay solid brick size masonry units with completely filled bed and head joint; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints.
- B. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and in all courses of piers, columns and pilasters, and where adjacent to cells or cavities to be reinforced or filled with concrete or grout. For starting course on footings where cells are not grouted, spread out full mortar bed including areas under cells.
- C. Set stone caps in full bed or mortar. Fill dowel, anchor, and similar holes solid. Wet stone joint surface thoroughly before setting; for stone surfaces which are soiled, clean bedding, and exposed surfaces with fiber brush and soap powder followed by thorough rinsing with clear water.
- D. Maintain joint widths shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8" joints.
- E. Cut joints flush for masonry walls that are to be concealed or to be covered by other materials, unless otherwise indicated.
- F. All mortar joints in stone veneer to be per shop drawings.
- G. Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners or jambs to shift adjacent stretcher units that have been set in position. If adjustments are required, remove units, clean off mortar, and reset in fresh mortar.

8.5 Repair, Pointing, And Cleaning

- A. Remove and replace masonry units which are loose, chipped, broken, stained, or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints including corners, openings, and adjacent work to provide a neat, uniform appearance, prepared for application of sealants.
- C. Final Cleaning: After mortar is thoroughly set and cured, clean masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and non-metallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample column; leave 1/2 column unclean for comparison purposes. Obtain approval of sample cleaning by Owner's Representative prior to proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and on-masonry surfaces from contact with cleaner by waterproof masking tape.
 - 4. Saturate wall surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clean water.
 - 5. Use bucket and brush hand cleaning method described in BIA "Technical note No. 20 Revised" to clean brick masonry made from clay or shale using job mixed detergent solution.
 - 6. Clean concrete unit masonry to comply with masonry manufacturer's directions and applicable NCMA "Tek" bulletins.
- D. Protection: Provide final protection and maintain conditions in a manner acceptable to installer, which ensures unit masonry work being without damage and deterioration at time of substantial completion.
- E. WARNING Do not use wire brushes, acid-type cleaning agents, cleaning agents containing caustic compounds or abrasives, or other materials or methods that could damage stone.

END OF SECTION

TS-05 SECTION 05500 – CUSTOM METAL FABRICATIONS

PART 1 -- GENERAL

1.1 Work Included

- A. This section covers the fabrication, furnishing, materials, tools, equipment, labor, and performances of all work and services necessary or incidental for the fabrication of metal elements as indicated on the drawings or as specified herein.

1.2 Method of Measurement and Payment

- A. Measurement and compensation for all metal fabricated elements shall be at the contract bid price for each contract item installed complete, per UNIT as noted in the contract documents. The bid amount shall be full compensation for all costs of shop drawings, structural engineering, furnishing, and installing all items as specified and shown on the construction documents plans and details, including, but not limited to the following:
- B. Furnish and installation of Intersection Marker, per EACH. Including all items necessary for fabrication and installation, including but not limited to: Concrete footing, split face limestone veneer, aluminum metal work and framing, internal wiring internal LED light, LED Driver, extruded push through acrylic letters, mounting hardware, fit and finish etc.

1.3 Quality Assurance

- A. Fabricator shall have Minimum of 5 years of experience with similar elements for all fabrication elements that are required to be UL Approved.
- B. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

1.4 References

- A. ASTM A653/A 653-M-00 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized)-or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process).
- B. ASTM A123/A122M-00- Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM B117 Test Method – Salt Spray (Fog) Testing.
- D. ASTM A787-96 Standard Specifications for Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing

- E. ASTM B209–10 Standard Specifications for Aluminum and Aluminum-Alloy Sheet and Plate
- F. ASTM B221 Standard Specifications for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
- G. ASTM B308 / B308M Standard Specifications for Aluminum-Alloy 6061-T6 Standard Structural Profiles
- H. ASTM B429 Standard Specifications for Aluminum-Alloy Extruded Structural Pipe and Tube
- I. Aluminum Association – Aluminum Design Manual
- J. TT-P-645 – Paint, Aluminum, Heat Resisting

1.5 Submittal

- A. Submit data verifying qualifications and min five (5) years of experience for fabricator and installer of similar fabrications and components. Include list, min three (3) of completed projects having similar scope of work identified by name, location, date, reference names, and phone numbers.
- B. Manufacturer's literature
- C. Manufacturer's documentation with min of 5 year experience (as required)
- D. Warranty information for all components and finishes
- E. Certified shop drawings detailing dimensions, materials, structural engineering, footings, anchor bolts, and finishes shall be submitted prior to fabrication.
- F. Actual color chips of selected color from requested color palettes shall be selected by Owners Representative.

1.6 Product Handling And Storage

- A. Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

PART 2 -- MATERIALS

2.1 Materials

- A. Materials for all signage features and structures shall be as detailed on drawings. Fabrication and finishing of structures and elements shall be completed as per shop drawings. Onsite fabrication and finishing of structure is not allowed.
- B. Stainless steel as detailed to be: Stainless Steel Grade 316
- C. Aluminum Tubing as detailed to be: Alloy and temper 6016-T6
- D. All hardware, anchor bolts, washers, lock washers and nuts shall be stainless steel. Stud anchors shall have a minimum pullout strength of 8000 pounds based on 4000 psi concrete unless otherwise noted.

PART 3 -- EXECUTION

3.1 Preparation

- A. All new installation shall be laid out by the contractor in accordance with the construction plans. Verify areas to receive structures or elements are completed to final grades, elevations, and materials.
- B. Coordinate installation with work of other sections of these specifications.

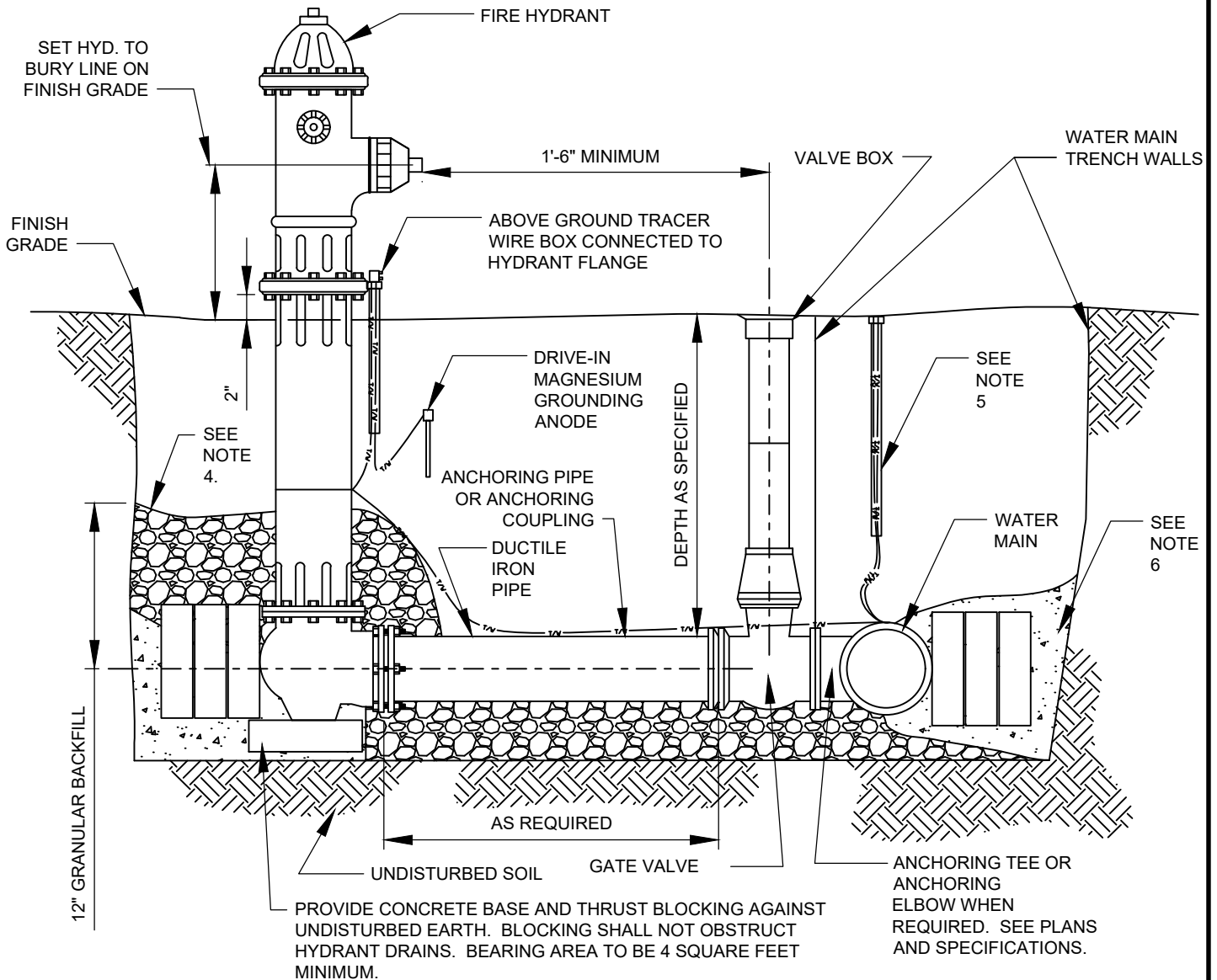
3.2 Installation

- A. Install all elements and structures in accordance with the Drawings, Specifications, and manufacturer's instructions.
- B. Field cutting, drilling, or welding of prefinished metal components will not be allowed without prior approval of the Engineer.

3.3 Cleaning

- A. The contractor shall clean any dirt or protective wrap following installation and remove all excess materials and trash from the jobsite.

END OF SECTION



NOTES:

1. ALTERNATE MECHANICAL JOINT RESTRAINT SYSTEMS ARE SUBJECT TO OWNER'S APPROVAL.
2. APPLY POLYETHYLENE ENCASEMENT ON PIPE, VALVE, VALVE BOX FIRE HYDRANT AND FITTINGS AS SPECIFIED.
3. HYDRANT STEAMER NOZZLE TO BE TURNED TOWARDS STREET UNLESS SPECIFIED OTHERWISE.
4. INSTALL LAYER OF FILTER FABRIC OR 4 MIL PLASTIC FILM BARRIER OVER DRAIN FIELD. DRAIN FIELD COMPRISED OF 1/2 CU. YD. MINIMUM OF 1" WASHED GRAVEL.
5. USE SNAKEPIT TRACER WIRE BOXES ON WATERMAIN AS SPECIFIED IN PLANS.
6. USE CONCRETE BLOCKS IF SOIL IS LOAD BEARING, OTHERWISE, USE POURED CONCRETE THRUST BLOCK AS SPECIFIED IN PLANS.

DRAWN BY S. WIESKAMP	DATE 11/30/04
APPROVED BY A. GROSS	DATE 2-18-15
REVISED BY A. HANEY	DATE 2-12-15
SCALE NONE	

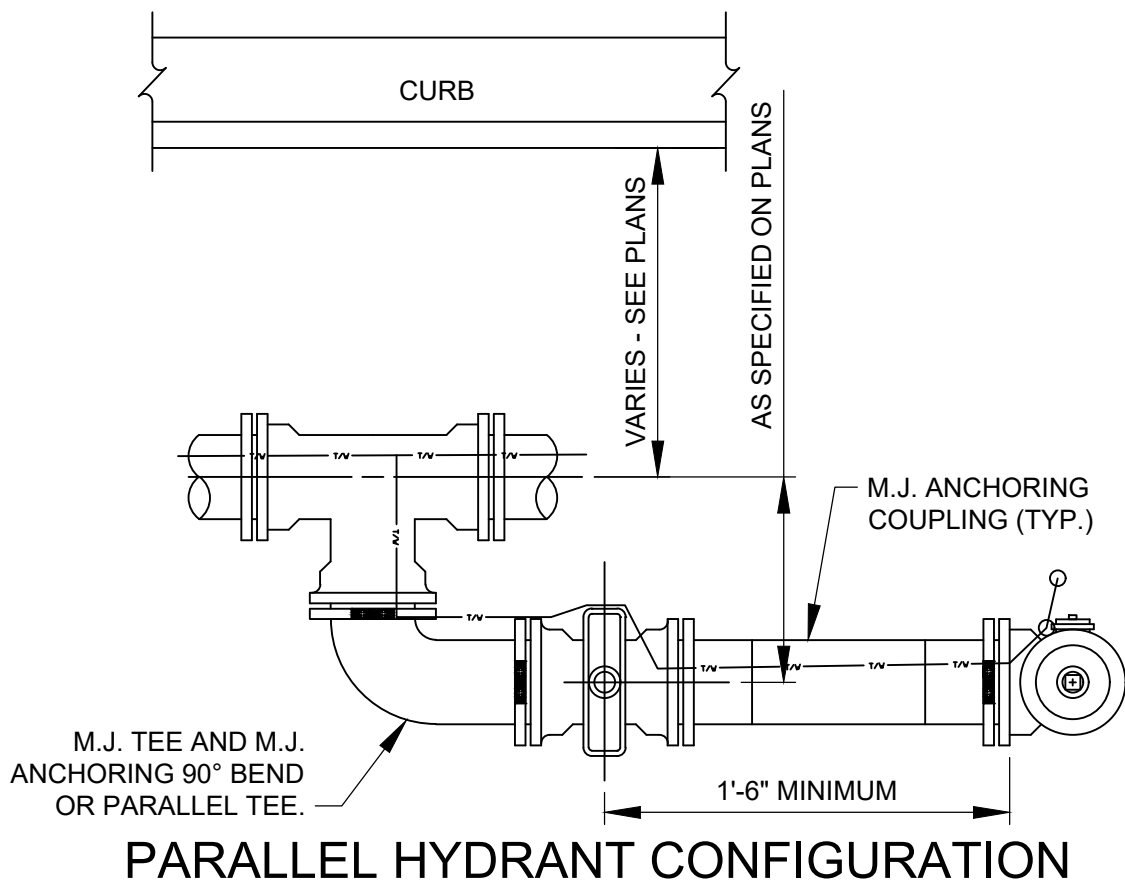
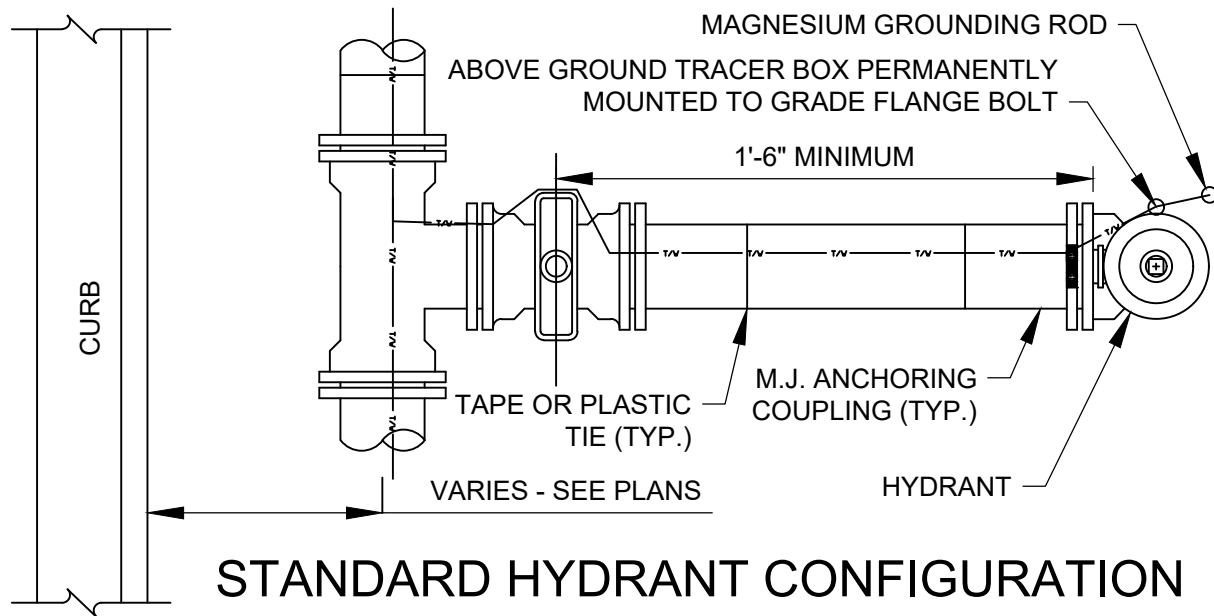
HYDRANT INSTALLATION DETAIL ELEVATION



MUSCATINE POWER & WATER

FILE No. 142

DRAWING No. AWD0212A



DRAWN BY S. WIESKAMP	DATE 11/30/04
APPROVED BY A. GROSS	DATE 2/17/15
REVISED BY A. HANEY	DATE 2/17/15
SCALE NONE	

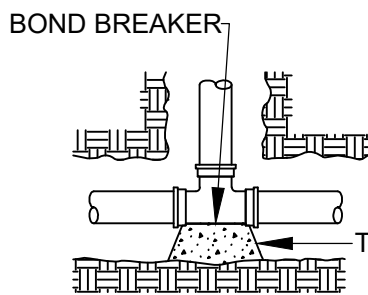
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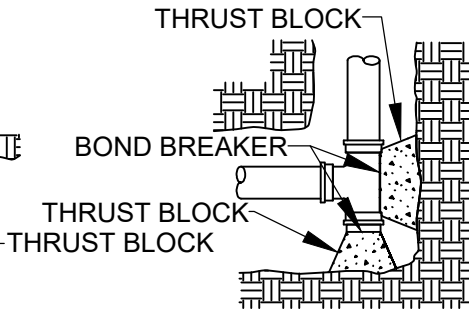
MUSCATINE POWER & WATER

FILE No. 142

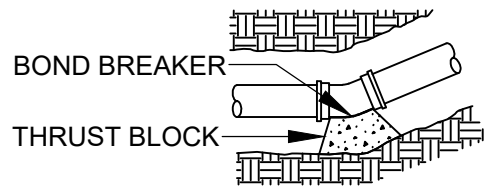
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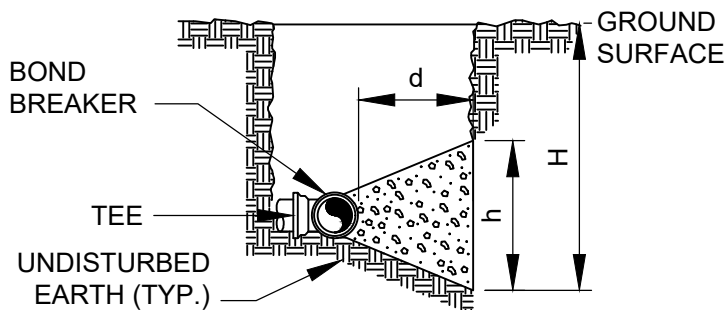
TEE (PLAN)



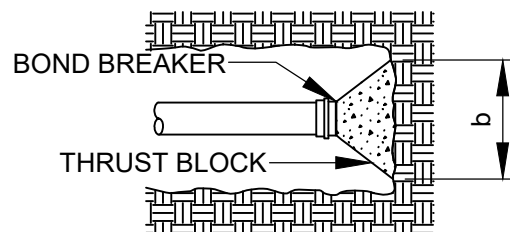
PLUGGED TEE
(PLAN)



BEND (PLAN)



ELEVATION



DEAD END (PLAN)

NOTES:

- 1) BEARING SURFACE SHOULD, WHERE POSSIBLE, BE PLACED AGAINST UNDISTURBED SOIL. WHERE IT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY, VERIFIED BY IN PLACE DENSITY TESTING.
- 2) BLOCK HEIGHT (h) SHOULD BE EQUAL TO OR LESS THAN ONE-HALF THE TOTAL DEPTH TO THE BOTTOM OF THE BLOCK, (H), BUT NOT LESS THAN THE PIPE DIAMETER.
- 3) BLOCK HEIGHT (h) SHOULD BE CHOSEN SUCH THAT THE CALCULATED BLOCK WIDTH (b) VARIES BETWEEN ONE AND TWO TIMES THE HEIGHT.
- 4) DO NOT ALLOW CONCRETE TO DIRECTLY CONTACT JOINTS OR FITTING BOLTS, PROTECT JOINTS AND BOLTS WITH POLYETHYLENE ENCASEMENT.
- 5) BLOCK DEPTH (d) SHALL BE AT LEAST $\frac{1}{2}$ BLOCK HEIGHT (H).

DRAWN BY S. WIESKAMP	DATE 12/02/04
APPROVED BY Gerald R. Peterson	DATE 01/13/05
REVISED BY E.B.GLENNEY	DATE 3-28-08
SCALE NONE	

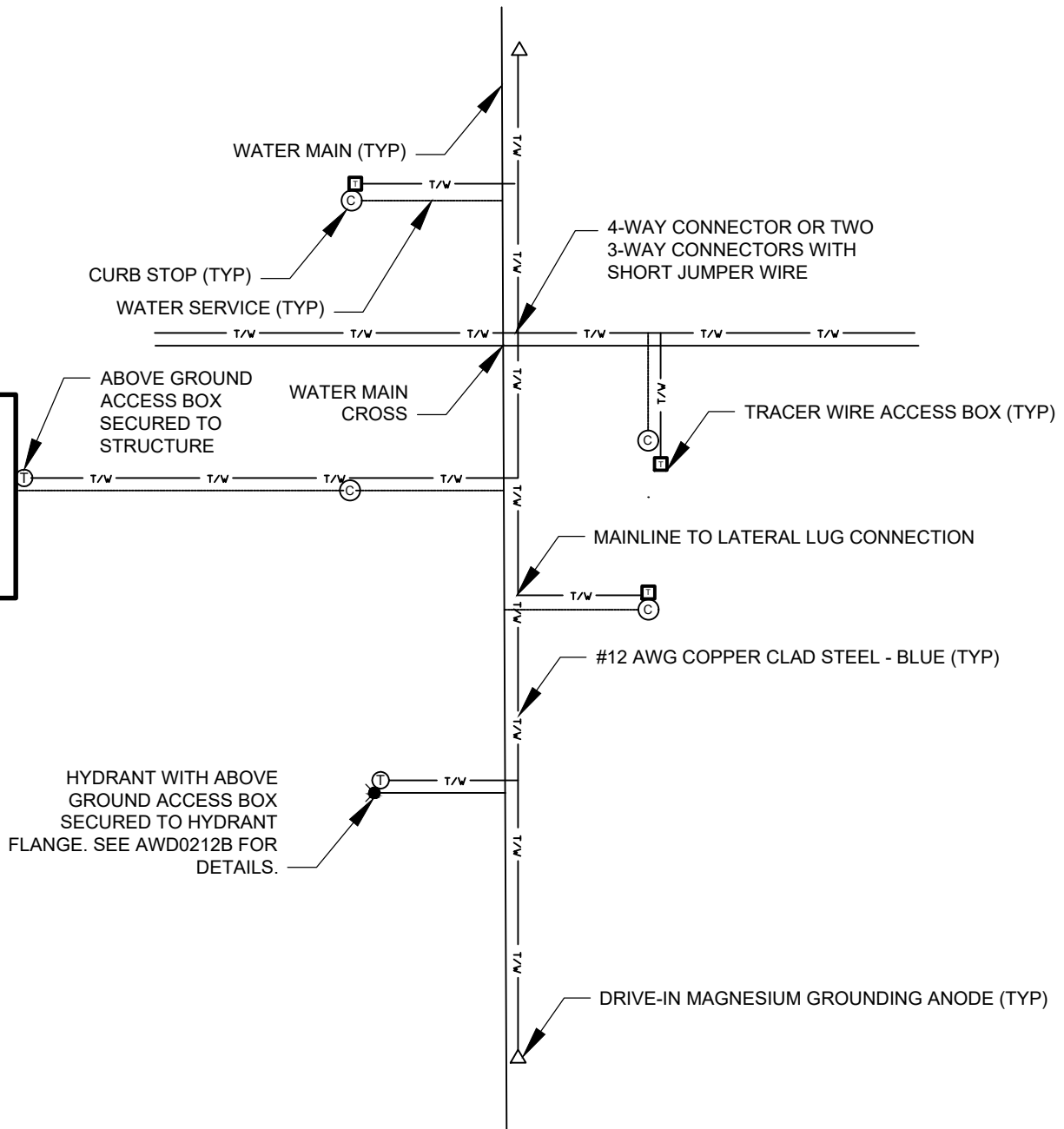
THRUST BLOCK DETAILS



MUSCATINE POWER & WATER

FILE No. 142

DRAWING No. AWD0212C



NOTES

1. TRACER WIRE SHOWN OFFSET FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON TOP OF PIPE AND FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.

DRAWN BY A. HANEY	DATE 2/10/15
APPROVED BY A. GROSS	DATE 2/18/15
REVISED BY A. HANEY	DATE 2/10/15
SCALE NONE	

TRACER WIRE INSTALLATION PLAN



MUSCATINE POWER & WATER

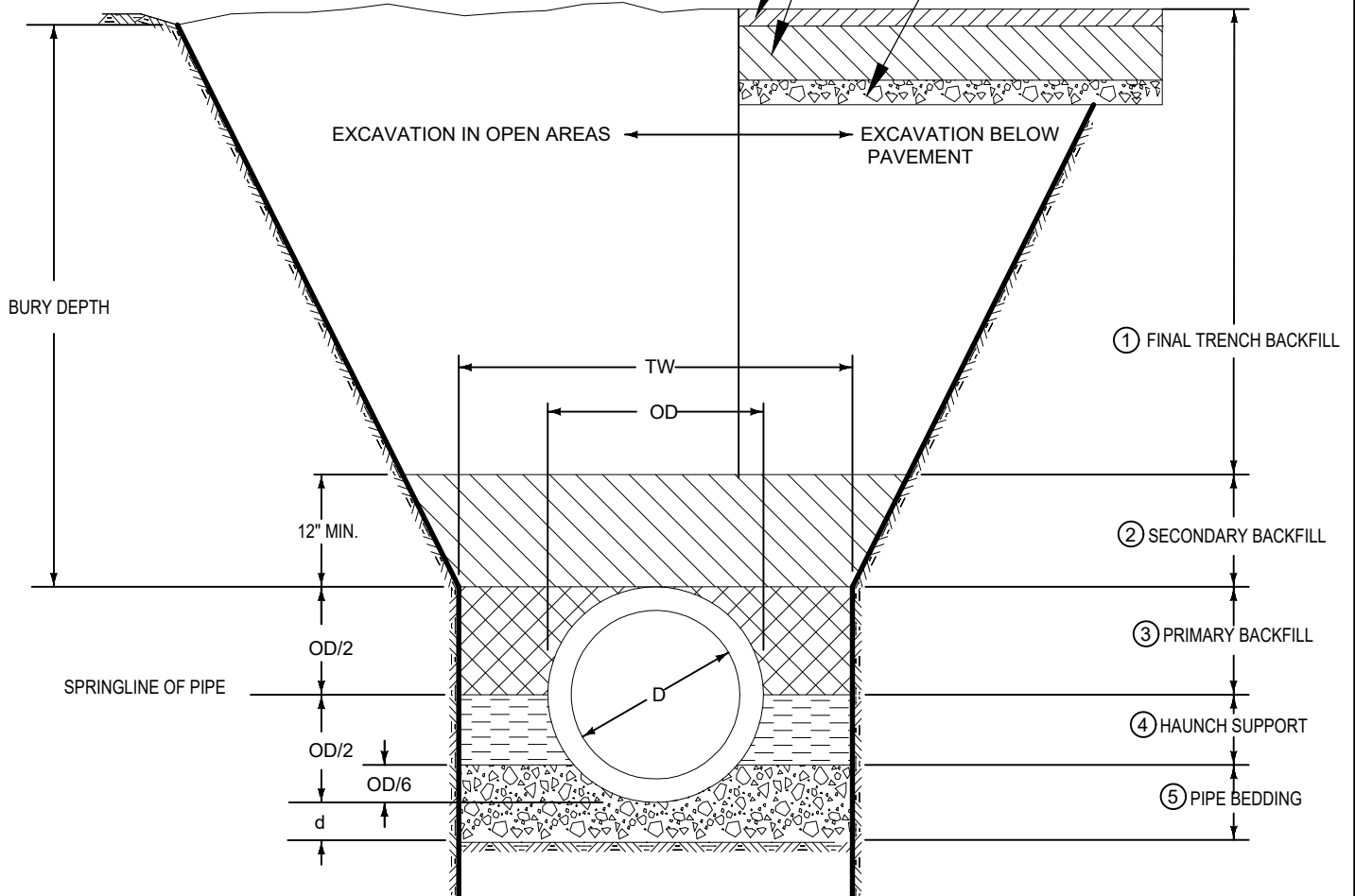
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DRAWING No. AWD0212D

REFER TO THE CONTRACT DOCUMENTS FOR SPECIFIC MATERIAL AND PLACEMENT REQUIREMENTS.

8" PCC PAVEMENT MIN. OR 6" PCC WITH 2" ASPHALT OVERLAY MIN. MATCH EXISTING THICKNESS IF GREATER THAN 8".

4" DRAINABLE BASE



① BACKFILL SHALL BE CLEAN SAND OR MANUFACTURED SAND WITHIN 10 FT. OF PAVEMENT.

②③④ BACKFILL SHALL BE CLEAN SAND OR MANUFACTURED SAND REGARDLESS OF LOCATION.

⑤ IF ROCKS OR UNSUITABLE SOILS ARE ENCOUNTERED, OVER EXCAVATE AND REPLACE WITH COMPACTED ROCK OR MANUFACTURED SAND; OTHERWISE PIPE CAN BE BEDDED ON NATIVE MATERIALS.

Key

OD = OUTSIDE DIAMETER OF PIPE

D = INSIDE DIAMETER OF PIPE

TW = TRENCH WIDTH AT TOP OF PIPE, MAX IS OD + 12" EACH SIDE

d = DEPTH OF BEDDING MATERIAL BELOW PIPE, 6"

TRENCH DETAIL

DRAWN BY A. HANEY	DATE 5-22-15
APPROVED BY AHREN GROSS	DATE 5-28-15
REVISED BY	DATE
SCALE NONE	



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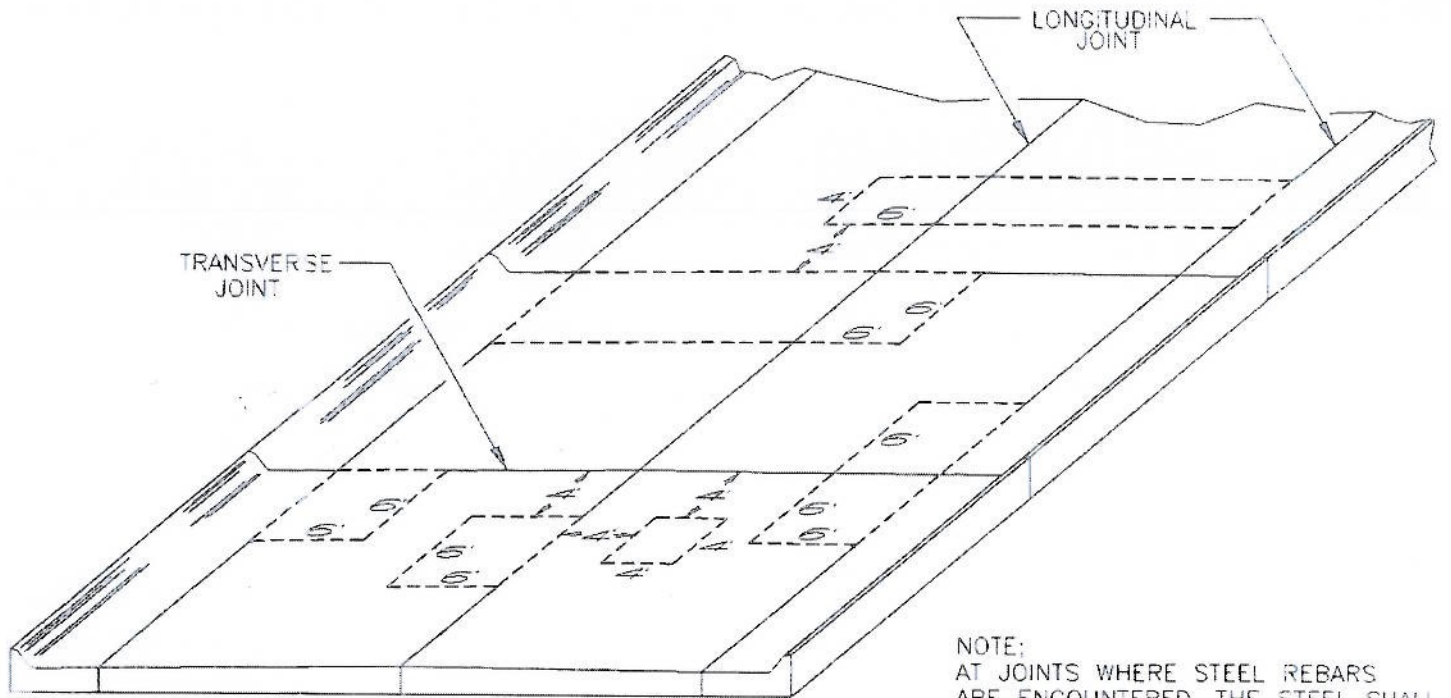
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DRAWING No. AWD0212E

CITY GUIDELINES FOR REPAIRS IN STREETS
City of Muscatine, Iowa

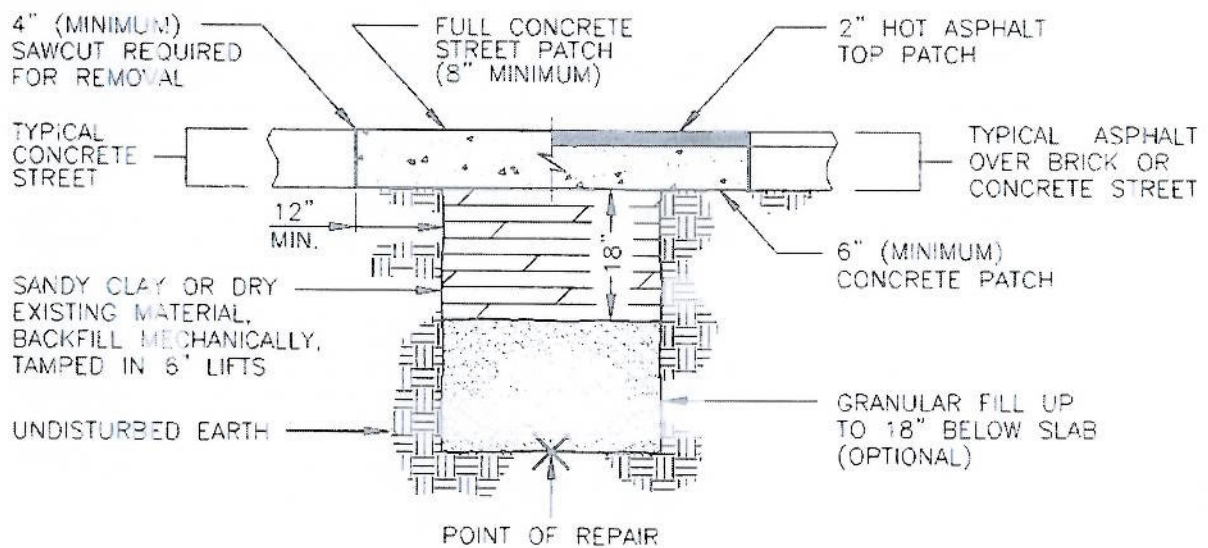
1. Dimensions for a Utility Patch:
 - A. Minimum dimensions for a utility patch bounding a joint or pavement edge shall be six (6) feet.
 - B. A patch inside a pavement panel (interior patch) not bounded by a joint or an edge shall have minimum dimensions of four (4) feet.
 - C. All sides of an interior patch shall be at least four (4) feet from a pavement joint.
 - D. Patches should be eight (8) inch thickness minimum.
2. Untreated granular material shall not be placed within eighteen (18) inches of the slab, unless otherwise authorized.
3. Saw cuts shall be a minimum of four (4) inches deep, preferably full depth.
4. Asphalt streets and sealcoated streets shall be patched with a minimum of three (3) inches of hot mix asphalt.
5. No frozen material may be placed in the fill.
6. Contractors are required to obtain excavation permits, and to have all utilities located prior to excavation.





NOTE:
AT JOINTS WHERE STEEL REBARS
ARE ENCOUNTERED, THE STEEL SHALL
BE STRAIGHTENED PRIOR TO PATCHING.
KEYWAYS SHALL BE CLEANED AND
AND THE SUBGRADE AND SIDES OF
EXISTING PAVEMENT SHALL BE
DAMPENED, PRIOR TO PATCHING.

MINIMUM SIZE PATCHES FOR STREET REPAIR



TYPICAL TRENCH AND STREET REPAIR

FULL DEPTH HOT MIX ASPHALT FINISH PATCHES

TRAFFIC CONTROL: Furnishing, placing and removal of all signs, barricades, and flag man shall be the responsibility of the contractor and shall be in compliance with the current manual on uniform traffic control devices.

PAVEMENT REMOVAL: When repairing A.C. or P.C.C. pavement, the pavements shall be sawed full depth of the existing pavement and removed. If the base material is unstable, it shall also be removed.

Except where an existing transverse or longitudinal joint forms the edge of the patch, the edge shall be constructed by sawing full depth of the pavement resulting in a reasonably vertical edge when removing the material. The work shall be done in such a manner that the edges and remaining pavement are not damaged.

CLEANING AND PREPARATION: All loose material and debris shall be removed with hand tools and air blast. The entire area shall be free of foreign material and moisture. All removal material shall remain the property of the Contractor and shall be removed from the job site and disposed of at the Contractor's disposal area.

The base shall be dry and tamped with a mechanical tamper until the desired compaction is achieved.

TACK COAT: Tack coat may be SS-1, SS-1H, RC-70 and MC-70 may be used after 1 October. Tack Coat shall only be applied when the surface temperature exceeds 35 degrees Fahrenheit.

HOT MIX ASPHALT MIXTURE: The existing surface and the surface of each layer shall be free of moisture and foreign material before placing mixture. The hot mix asphalt temperature range shall be 245 to 330 degrees Fahrenheit when placed. The hot mix asphalt mixture shall use a ½" Type "A" aggregate and shall meet or exceed 300,000 ESAL H.M.A. criteria.

The contractor shall furnish a plant certification specifying the H.M.A. is in compliance with specifications along with a job mix formula for each 100 ton of mix or as required by the Engineer.

EQUIPMENT: Hand tools, mechanical tamper and a vibratory roller suitable for the work. All equipment shall be approved by the Engineer.

PROCEDURE: Tack coat shall be applied to all vertical surfaces that will come in contact with the hot mixture.

The application rate of the tack coat material shall not exceed 0.15 gal per square yards. The H.M.A. mix shall not be placed when the surface temperature is below 35 degrees Fahrenheit.

The hot mix asphalt mixture shall be placed in lifts not exceeding 3" after compaction. Each lift shall be compacted with a mechanical tamper. The final lift shall be compacted with a vibratory roller and placed so that after compaction the surface of the patch is flush with the existing pavement.

The patch may be open to traffic when the patch temperature is cool to the touch and all excess material and debris have been cleaned and removed by the Contractor.

